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Hypovitaminosis D in overweight/obese children treated at the Centre for Nutritional Recovery and Education (CREN) in the Southeast of Brazil

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Statement of the Problem: The Center for Nutritional Recovery and Education (CREN) is an international reference in the treatment of under-nutrition and excess of weight. Circulating 25-hydroxyvitamin D [25 (OH) D] positively associates with lean body mass. Vitamin D can be obtained from foods and supplements or is endogenously synthesized in the skin in response to the sun UVB radiation. The major circulating form of vitamin D is 25 (OH) D, which is commonly used as an indicator of vitamin D status. Knowledge of the health effects of vitamin D is increasing. In addition to the well-known beneficial effect of vitamin D on bone health, there is some evidence that higher serum levels of 25 (OH) D are associated with better muscle strength and increased risk of several diseases such as diabetes and other autoimmune diseases, cancer and infections in infants and adolescents. Aim of this study was to evaluate the prevalence of hypovitaminosis D in children under nutritional treatment at CREN. The population (N=258) that attended the health service from July 2015 to July 2016 was analyzed.

Methodology: Excess weight was defined by Z-score BMI for age>1. The treatment protocol included dosage of D-25OH3 measured by micro-particle immunoassay by chemiluminescence (CMIA).

Results: The presence of hypovitaminosis D (insufficiency and deficiency, D25OH3 <29 ng/ml) was greater than 80% (Table 1). The highest frequency of D25OH3 deficiency (<20 ng/ml) was found in the age group of 10 to 16 years, corresponding to 46.8% of the children.

Conclusion & Significance: Hypovitaminosis D is frequent among children with excess of weight and deserves attention for investigation and adequate supplementation as a way of preventing complications, as well as acting as a co-adjuvant in the treatment, considering its association with metabolic alterations.

Biography

Pollyanna Fernandes Patriota is a Nutritionist, Professor of Public Health at Federal University and, PhD student in Nutrition at Federal University of São Paulo (Universidade Federal de São Paulo - UNIFESP). She has experience in teaching, research and extension in the field of Nutrition and Public Health, Maternal and Child Health and Childhood Obesity.

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